REMARKS

With this response, claim 6 is canceled and new claims 113-118 are added. Support for the new claims can be found, for example, on page 2, lines 25-26, on page 5, lines 12-13, and in original claim 6. Claims 32-111 have been canceled previously without prejudice. Accordingly, claims 1-5, 7-31 and 112-118 are pending and presented for examination.

No new matter is added by the present Amendment. Applicant specifically reserves the right to pursue the subject matter of the canceled or amended claims in a related application. The rejection levied in the Office Action is addressed below.

Claim Rejections – 35 U.S.C. § 103

Claims 1-31 and 112 have been rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 2,882,249 ("Posnansky"); U.S. Patent 6,123,731 ("Boyce"); and Gunatillake *et al.*, *European Cells and Materials* 5:1-16, 2003 ("Gunatillake").

The Examiner states that Posnansky teaches polyurethanes prepared by reacting hydroxy-containing fatty acids with organic polyisocyanates. More correctly, Posnansky teaches the reaction of non-linear *polyacidesters* polymerized from hydroxy-containing fatty acids, with polyisocyanates to form plastic materials. Reaction of these non-linear polyacid polymers with a polyisocyanate leads to the formation of urethane linkages between the polymers. In short, the polyisocyanate crosslinks the polyacidester to form "even larger molecules" (see, col. 1, lines 56-64; col. 2, lines 33-35). In addition, the claims, as amended, recite fatty acids. By contrast, Posnansky teaches *polyacidesters* but not *fatty acids*.

Furthermore, as the Examiner admits, Posnansky does not teach a reinforcement embedded in the matrix as claimed in the present application. The Examiner cites Boyce for teaching the use of bone combined with a polymer in osteoimplants. However, even assuming for the moment that Posnansky could be combined with Boyce, the two references could not achieve the claimed invention. Boyce does not provide a specific teaching of a polyurethane prepared by reacting a biomolecule with a polyisocyanate. Boyce teaches an osteoimplant with chemical linkages between the surface-exposed collagen of adjacent partially demineralized bone elements with a nonbioasorbable material. Boyce does not explicitly teach a polyurethane made

from a biomolecule as claimed but rather discloses polyurethanes generally in a long list of possible polymers. The generic disclosure cited by the Examiner in column 4 certainly does not provide a teaching or even a suggestion for the use of a polyurethane made from a biomolecule.

Gunatillake fails to cure the deficiencies since Gunatillake does not teach the use of a polyurethane made from a biomolecule as claimed either. As an initial matter, Applicant respectfully points out that Gunatillake was published in May, 2003, while the present application claims priority to a provisional application (USSN 60/444,759) filed on February 4, 2003. Therefore, Gunatillake is not even proper prior art against the present application.

As noted already, the cited references without Gunatillake, even when combined, fail to teach or suggest the use of a biomolecule in the preparation of a polyurethane used in the claimed invention. Therefore, the Examiner certainly has not established a *prima facie* case of obviousness. Applicant requests that this rejection be removed.

Conclusion

For at least the reasons set forth above, each of the rejections in this case should be removed and the application should proceed to allowance. If, at any time, it appears that a phone discussion would be helpful, the undersigned would greatly appreciate the opportunity to discuss such issues at the Examiner's convenience. The undersigned can be contacted at (617) 248-5175.

Please charge any fees that are ***necessary*** to maintain pendency and/or protect the filing date of the present application to our Deposit Account Number 03-1721, referencing our Docket Number 2004367-0034.

Respectfully submitted,

/Brenda Herschbach Jarrell/
Brenda Herschbach Jarrell, Ph.D., J.D.
Registration Number: 39,223

Choate, Hall & Stewart LLP
Two International Place
Boston, MA 02110
t (617) 248-5175
f (617) 502-5002
bjarrell@choate.com
Date: December 2, 2009